SPAWAR

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# Are we Net-Centric Yet?

**Delores Washburn**
**SPAWAR 05**
**FORCEnet Domain Chief Engineer**
**PEO C4I&Space PMW160 Technical Director**
**Networks, Information Assurance, Enterprise Services**

# Overview

- Defining the Question
  - What does Net-Centric Really mean?
- Examples of Successes
- Example of Failures (still need more work)
- The Answer

# What do we really mean? – “Net Centric”

- Net-centricity
  - Relies on computing power and networked communications to provide a shared awareness of the battle Space resulting in superior decision-making, and the ability to coordinate complex military operations over long distances for an overwhelming war-fighting advantage
- FORCEnet Functional Concept for the 21st Century

FORCEnet is the Navy’s Implementation of Network Centric Warfare

# What do we really mean?

*Sample Terminology*

- Networked Communications
- Service Oriented Architecture
  - Designing application and system functionality as accessible and reusable services
- Metadata – Data about Data…
- Visibility
  - How does someone find your data?
- Accessibility
  - How does someone get your data?
- Understandability
  - Community-based agreements on the data

**What about information overload?**

# FORCEnet
# Technical Reference Guide
# for Program Managers

**Office of the FORCEnet Chief Engineer**
**SPAWAR 05**

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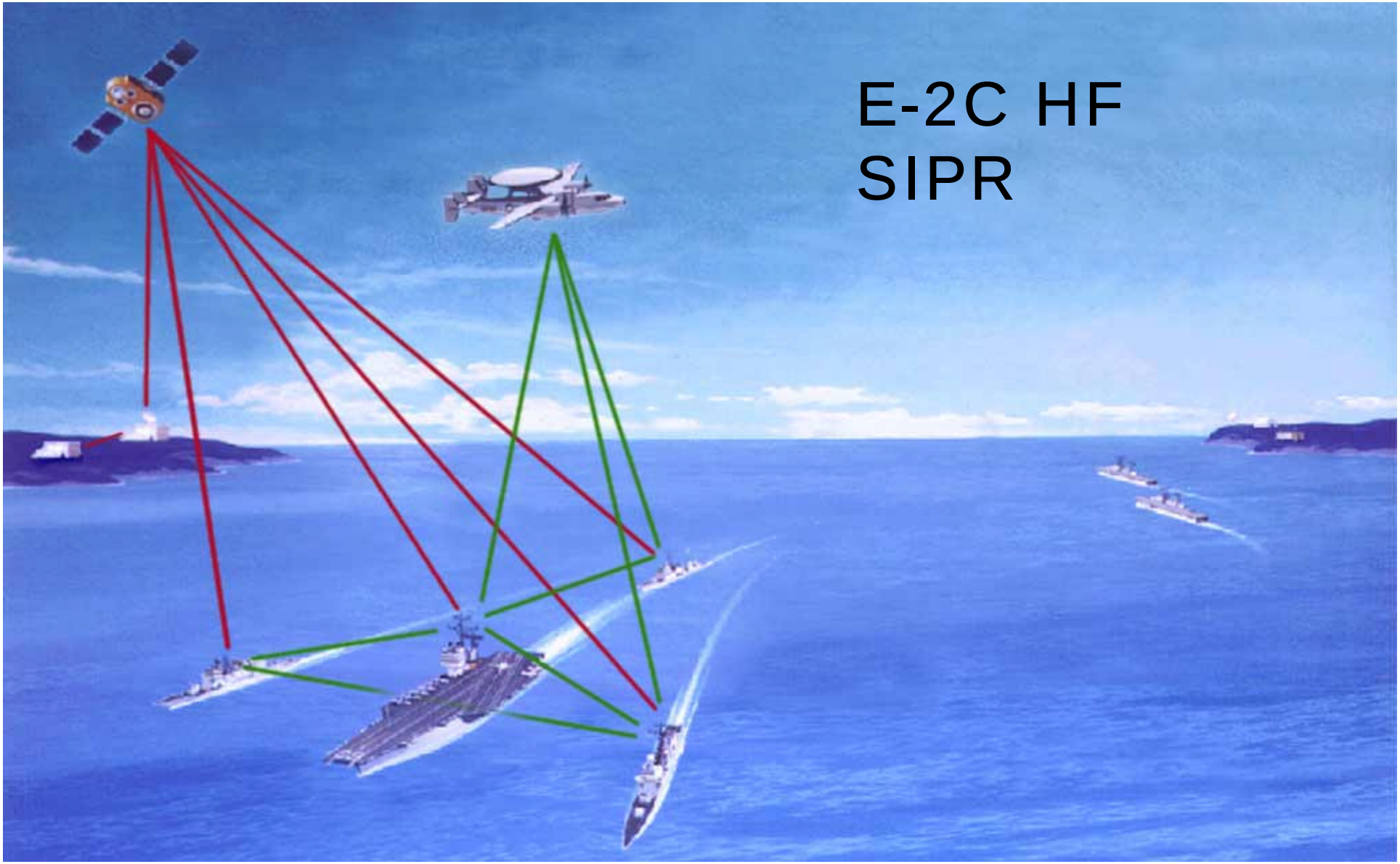
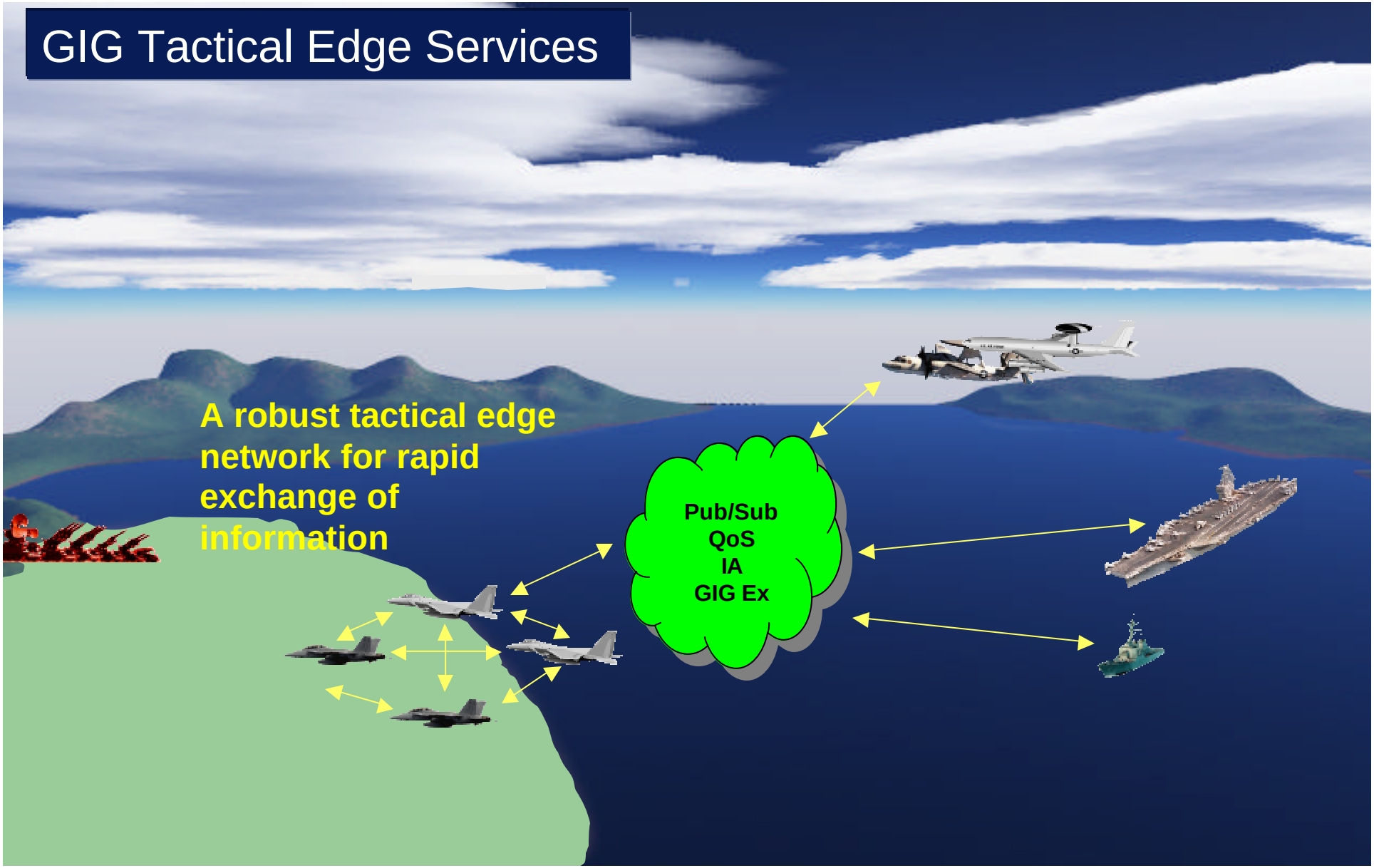
# Example of Success

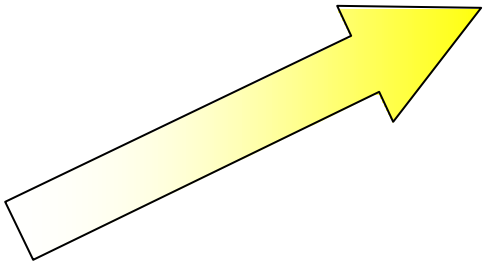


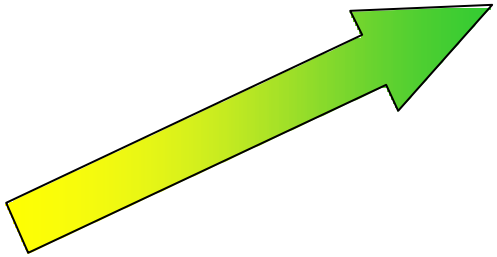
# Still Needs Work



# PEO C4I&Space Net-Ready Levels

There are degrees of Net-Centricity





***Based on Fn Concept Document***

**Full IT21**
**"Online"**

- IP Reach Back
- Local Area Networks
- Wideband Receive
- RF Management
- Survivable comms

**Level 0**

Today

**Net Connected**
**"Improved decision making"**

- Web-based services
- Improved network reliability and performance
- Increased bandwidth
- Improved coalition operations and data sharing
- Tailorable situational awareness tools
- Standardized data exchange between domains
- Defense in depth

**Level 1**

FY07

**Net Enabled**
**"Network based command and control"**

- Multi-path and improved transport reliability
- Dynamic bandwidth mgmt
- Customized applications and data sources
- Common infrastructure and data exchange standards
- Improved data exchange across domains
- Enterprise management for asset analysis and repair
- Initial knowledge management and automated decision aids
- Assured sharing
- Distributed command and control operations
- Modular and open architecture

**Level 2**

FY10

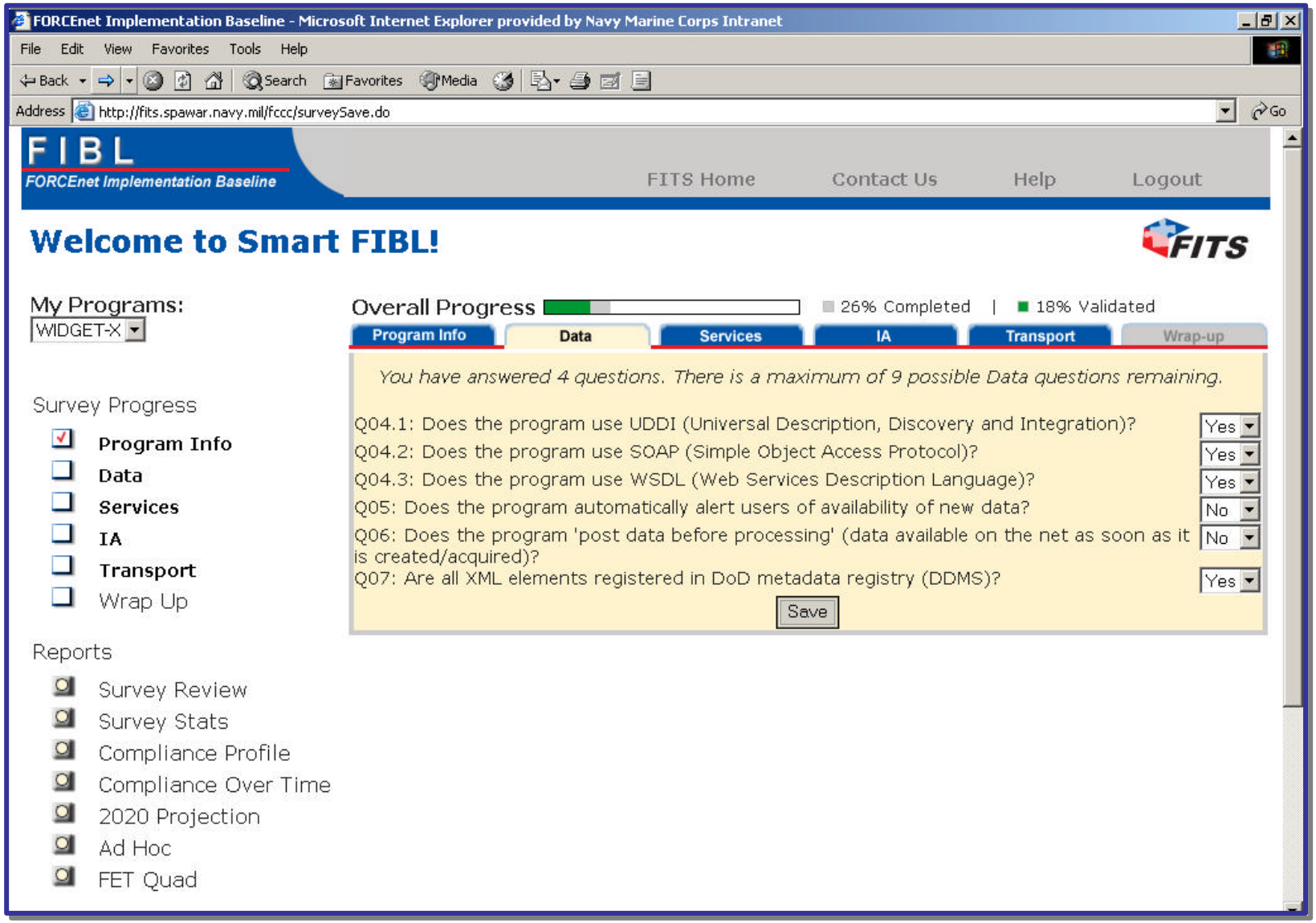
**Fully Net Ready**
**"Decision-making under undesirable conditions"**

- Robust, reliable communication to all nodes
- Reliable, accurate and timely information on friendly, environmental, neutral and hostile units
- Storage and retrieval of authoritative data sources
- Robust knowledge management capability with direct access ability to raw data
- User-defined and shareable SA
- Distributed and collaborative command and control
- Automated decision aids to enhance decision making
- Information assurance
- Seamless cross-domain access and data exchange.
- Interoperability across all domains and agencies
- Autonomous and disconnected operations
- Automatic and adaptive diagnostic and repair
- Modular architecture to expedite new capabilities

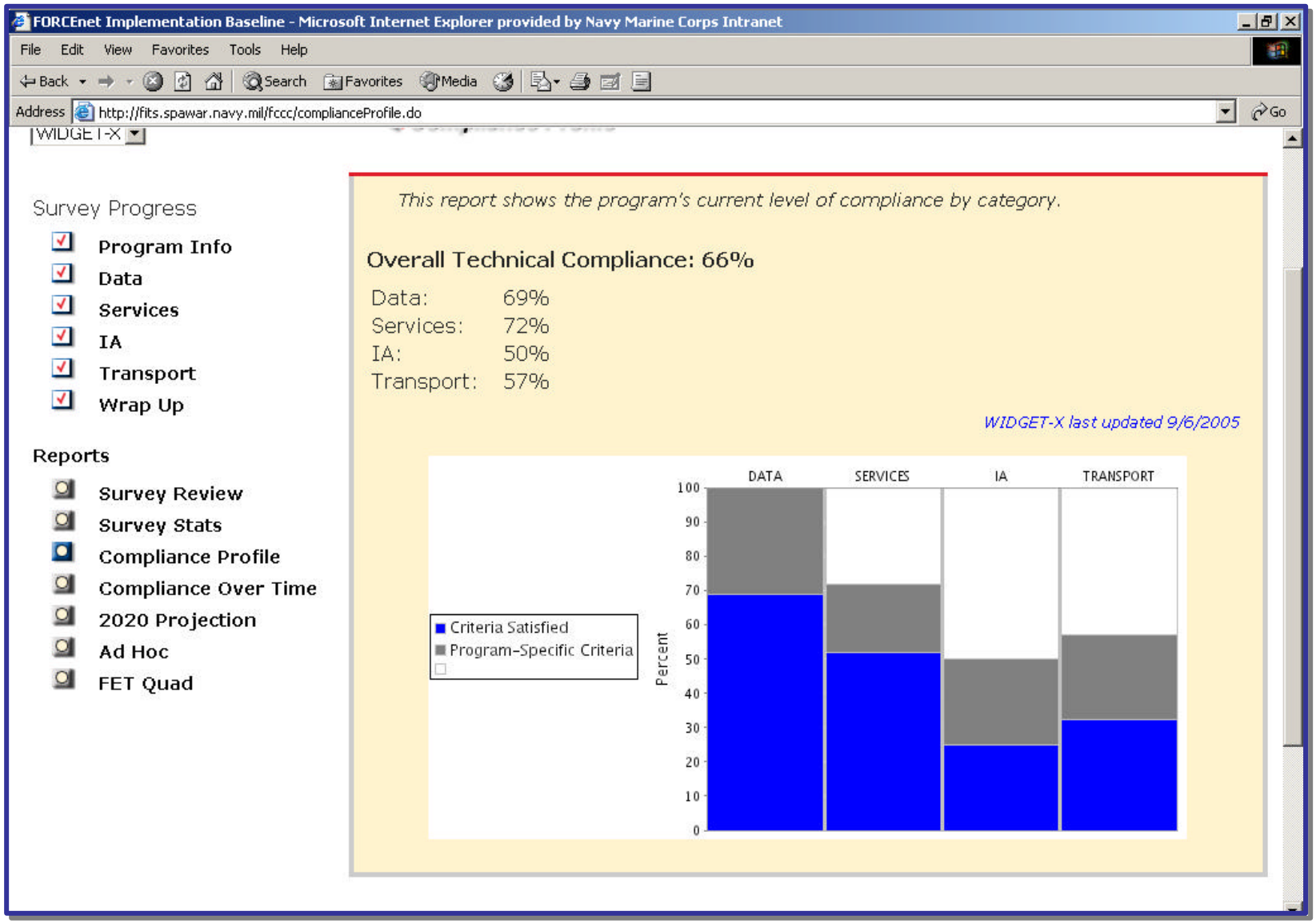
**Level 3**

FY14

# FORCEnet Technical Compliance Criteria



# Compliance Profile



# How Industry Can Help

Net Centricity - *There's still room for improvement!*

National Defense Industry Association

World Wide Consortium of the Grid
W2COG

Network Centric Operations Industry Consortium